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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/608,616	06/30/2000	Jayashankar Bharadwaj	042390.P8130	9458

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EXAMINER

KISS, ERIC B

ART UNIT PAPER NUMBER

2192

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/608,616

Applicant(s)

BHARADWAJ ET AL.

Examiner

Eric B. Kiss

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 36-69 is/are pending in the application.
- 4a) Of the above claim(s) 36-43 and 50-65 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 44-49 and 66-69 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 36-69 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

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DETAILED ACTION

1. The reply filed 4 October 2004 has been received and entered. Claims 36-69 are pending.

Election/Restrictions

2. Newly submitted claims 36-43 and 50-65 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-35 (cancelled by the present amendment) were drawn to profile-guided optimization within a compilation environment, classified in class 717, subclass 158.

New claims 44-49 and 66-69 also appear to be drawn to this invention.

II. New claims 36-43 are drawn to validation of an executable program, classified in class 717, subclass 126.

III. New claims 50-65 are drawn to annotating compiled code, classified in class 717, subclass 146.

Inventions I and [either of inventions II or III] are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, inventions II and II each have separate utility from invention I, such as aiding in software debugging. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

3. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 36-43 and 50-65 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Response to Arguments

4. Applicant's arguments filed 4 October 2004 have been fully considered but they are not persuasive.

In response to Applicant's arguments on p. 12, in the first paragraph, the Examiner asserts that *Kistler* does disclose processing the profile data when the CPU is idle (see, for example, p. 15, paragraph 2; p. 19, paragraph 2; and p. 61, paragraph 3).

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claim 46 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 46 recites the limitation "said generating the one or more profiles" in line 1. There is insufficient antecedent basis for this limitation in the claim. In the interest of compact prosecution, since claim 45 appears to provide a proper antecedent basis for this limitation, claim 46 is subsequently interpreted as being dependent from claim 45 instead of claim 44 for the purpose of further examination.

Claim Rejections - 35 USC § 102

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 44-49 and 66-69 are rejected under 35 U.S.C. 102(a) as being anticipated by Thomas Kistler, "Continuous Program Optimization," 1999, Ph.D. thesis, Department of Information and Computer Science, University of California, Irvine, CA (hereinafter *Kistler*).

As per claim 44, *Kistler* discloses running executable code (see, for example, subsections 2.1 and 2.2); collecting profile data while the executable code is running (see, for example, subsections 2.4 and 2.5); when the CPU is idle, processing the profile data (see, for example, p.

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15, paragraph 2; p. 19, paragraph 2; and p. 61, paragraph 3); and recompiling software based on the processed profile data (see, for example, subsections 2.4, 2.6, and 2.7).

As per claim 45, *Kistler* further discloses processing the profile data comprising generating one or more profiles (see, for example, subsection 2.5).

As per claim 46, *Kistler* further discloses wherein generating the one or more profiles comprises generation of a binary level profile from analysis of the profile data (see, for example, subsections 2.4 through 2.6); and derivation of a profile at high level intermediate language from the binary level profile (see, for example, subsection 2.4, especially at p. 26).

As per claims 47-49 and 66-68, these are machine-readable medium and system versions of the claimed method steps discussed above (claims 44-46). Further, *Kistler* discloses the method being implemented on top of the Oberon System 3 for the Macintosh® platform (first paragraph of subsection 2.1) and further discloses implementing the method into continuous optimization framework for the PowerPC 604e™ superscalar out-of-order processor. The use of a machine-readable medium is considered inherent and necessary in arriving at and/or utilizing these implementations, and all other limitations have been addressed as set forth above.

As per claim 69, *Kistler* further discloses creating an annotation (see, for example, subsection 2.5).

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric B. Kiss whose telephone number is (571) 272-3699. The Examiner can normally be reached on Tue. - Fri., 7:00 am - 4:30 pm. The Examiner can also be reached on alternate Mondays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Tuan Dam, can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Any inquiry of a general nature should be directed to the TC 2100 Group receptionist:

571-272-2100.

EBK/EBK
June 1, 2005



TUAN DAM
SUPERVISORY PATENT EXAMINER